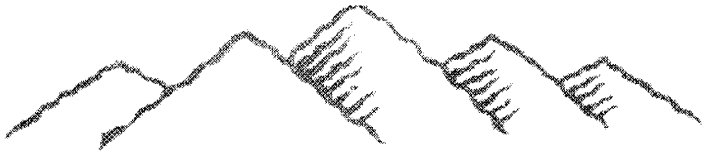
BIMID



Green Mountain Engineering

Surveying • Civil Engineering • Permitting • Estimating • Construction Consulting
1314 Paloma Avenue • Stockton, CA 95209 • phone 209-478-6525 fax 209-478-6540

US Army Engineer District, Sacramento
Planning Division
1325 J Street
Sacramento CA 95814

January 30, 2006

Phone 916-557-5159
Fax 916-557-7856

Attn: Ron Ganzfried

Re: Public law 108-361
Water Supply, Reliability and Environmental Improvement Act.
Notice of intent

Pursuant to Public law 108-361 Bethel Island Municipal Improvement District (BIMID or District) herewith notifies you of our intent to potentially participate in the program. Bethel Island, as well as the State of California would be greatly benefited from levee funding assistance from the Corps of Engineers.

Bethel Island is an Island of approximately 3500 acres. The island's interior elevation is between –10 ft and 0 ft below mean sea level and protected by about 12 miles of levee. The island is inhabited by more than 3000 people in addition to many business and recreational activities. Currently the levee conforms to the HMP minimum standards. The district would like to raise the levee to PL-99 standards in the near future.

The Bethel Island Municipal Improvement District is responsible for maintaining the levee around the Island as well as the main drainage facilities associated with pumping water off of the island. The district's funding is provided by an ad valorem tax from Contra Costa County. Which is to say that the district receives a percentage of the property tax collected from the county. In addition BIMID participates in the State Department of Water resources (DWR) subventions program as well as the special projects program.

Bethel Island is considered one of the 8 Western Delta Islands that play a major role in protecting the water quality for the majority of the State of California. Studies have proven that in the event of a levee failure on one of these islands the salt-water intrusion line will be driven upstream potentially ruining the water quality for both the state and federal water projects that pump water to southern California.

Following is a list of potential projects that BIMID would like you to consider for assistance.

1. Horseshoe bend waterside slope stabilization and seepage control.
2. Willow Rd seepage and structural upgrade.
3. Rock slope protection.
4. Crown raising and road upgrades.

Following is a brief description of each project. Also enclosed are tentative sketches of the projects and a rough estimate of the costs involved.

1. Horseshoe bend seepage and waterside slope stabilization.

This area of the levee Station 120+00 to 180+00 is an area that has concerned the district for many years with very steep and deep waterside slopes with two significant depressions of depth in excess of 30 ft. This area has also experienced significant seepage. Upgrades have been limited to small projects due to the high cost of the anticipated complete fix of the problem. 200 ft of sheet pile have been installed and the landside has been widened and buttressed.

The biggest concern for the district is that this problem is caused by scour. As implied by the name of the site, the levee provides a horseshoe curve that likely causes eddies which induce scouring action. At this time BIMID is monitoring the situation with hydrographic surveys to verify if scouring is indeed taking place.

During the storm of New Years day 2006 significant erosion of the waterside slope protection was experienced in this area as well as seepage at the toe of the levee.

Potential options to be investigated at this time include:

A. Provide engineered rock fill at scoured areas and reconstruct slope with graded rock.
B. Provide fill using dredge material or on island sand, potentially utilizing a geotextile cap and or geobags.
C. Create and alternate river channel through the flooded "Little Franks Tract" to divert the currents away from the horseshoe bend.
D. Installing cutoff walls for seepage control.

Note that if Item C were designed to pump the material into Geobags at the Horseshoe bend then Item C would be incidental to B.

2. Willow Rd seepage and structural upgrade.

This portion of levee from station 190 to 220 and 270 to 320 +/- is an area that experiences significant seepage and is densely populated with encroaching houses adjacent to the levee. In order to expand the levee to higher standards the encroaching structures make it difficult for conventional landside levee upgrades. The district would like to review all of the options for upgrading the levees and determine a viable fix and proceed with its implementation. Potential options available at this time include:

A. Raising and widening the levee toward the waterside to the District standard in excess of the PL99 standard.
B. Using core trenches or sheet pile to cut off seepage.
C. Using a sheet pile structure to provide a structural upgrade equivalent to the district standard levee template and cutting off seepage.

3. Rock slope protection.

The district is always in need of additional rock slope protection to protect the waterside slope from erosion and wave wash. The levee has been upgraded from station 20+00 to 190+00 along the landside. Providing waterside slope protection in these areas will make the levee complete and up to district standards. During the storm of New Years day 2006 significant erosion of the waterside slope protection was experienced in this area due to high water and winds.

4. <u>All weather road upgrade.</u>

Installing base rock and raising the levee crown. The levee is accessible around the entire island. Providing a base rock road will greatly increase the districts ability to maintain and patrol the levee in inclement weather conditions.

All of these projects are consistent with the provisions of Public law 108-361Water Supply, Reliability and Environmental Improvement Act. Specifically: Sec 103 Bay Delta Program, Paragraph (f) Description of Activities Under new and Expanded Authorization, Section (3) Levee Stability, Item (D) Projects Items:
(i) Reconstruct levees to Base level of protection
(ii) Enhance the stability of levees of special concerns
(vi) Reconstruct delta levees using dredged materials

Enclosed is a map of the island with the district stationing highlighting the areas described above. Additional information regarding approximate quantities and estimated costs are also included. Enclosed also is a letter from Paul Harper, The BIMID district manager stating the district Notice to cost share as outlined in the program parameters.

Thank you for the opportunity to potentially participate in the program.

Green Mountain Engineering.

Dominick Gulli PE 50887, PLS 7244

Attach: Preliminary Construction Estimate dated 1/28/06
11 x 17 Drawings of upgrade scenarios.

CC: BIMID
Hultgren Tillis Engineers

Bethel Island Municipal Improvement District
3085 Stone Road
PO Box 244
Bethel Island, CA 94511-0244
(925) 684-2210
Fax: (925) 684-0724
Email: bimid@sbcglobal.net
Web site: www.bimid.com

January 30, 2006

Colonel Ronald N. Light
District Engineer
Sacramento District
U.S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814

Re: Public law 108-361
Notice of intent to cost share

Pursuant to Public law 108-361 Bethel Island Municipal Improvement District (BIMID or District) herewith notifies you of our intent to participate in feasibility studies and or other actions in the development of the projects outlined in the Notice of intent from Green Mountain Engineering dated 30Jan06. BIMID will act as the non-federal sponsor for the projects.

BIMID understands that the type, cost and scope of actions will be determined and specified later if you select our projects for development or implementation pursuant to the act. BIMID also understands that if our project is approved for implementation we will be responsible for sharing the cost of planning, designing and the implementation of the project with the US Army Corps of Engineers; providing all necessary lands easements, rights of way, relocations and suitable borrow or excavated material disposal areas; and accomplishing operation, maintenance, repair, replacement and rehabilitation of the project.

BIMID can also help in participation by providing borrow material and engineering data performed to date.

Please note that this letter of intent is not an obligation of funds. We look forward to working with the US Army Corps of Engineers, the State of California and other pertinent CALFED agencies and stakeholders on this important project.

If you have any questions please contact me at (925) 684-2210.

Sincerely,

Paul Harper
BIMID District manager

PH/jh

Bethel Island Municipal Improvement District

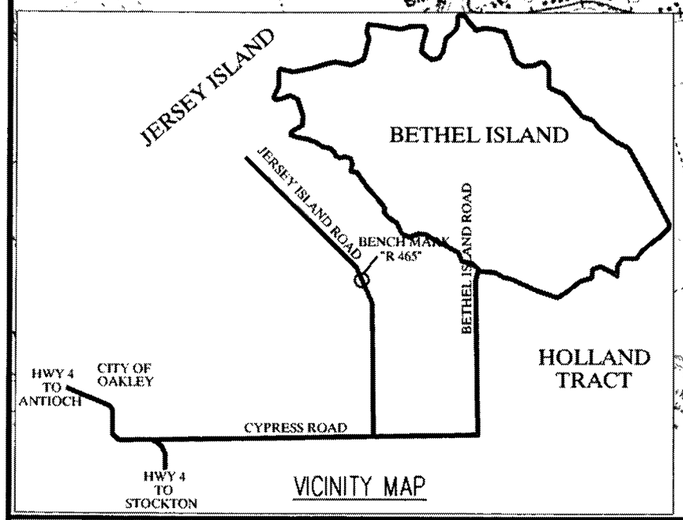
Green Mountain Engineering

Preliminary construction estimates for Corp of Engineers Public law 108-361 application *1/30/2006*

Description	Quantity to date	unit	Unit Cost	Estimated Budget
1. Horseshoe Bend Upgrades				
Station 120-122,125-128,137 to 165 and 173 to 177				
Waterside fill	100873	cy		
Slope Fill	24891	cy		
Options				
A.Engineered Rock	251528	tons	$35.00	**$8,803,480**
or				
A1. Dregde fill in geo tubes/bags for waterside fill	100873	cy	$20.00	$2,017,460
Rock at slope fill	49782	ton	$35.00	$1,742,370
Total				**$3,759,830**
C. Diversion channel through Litte Franks tract	200000	cy	$15.00	**$3,000,000**
D. Sheetpile cutoff wall for seepage Sta 125 to 185	6000	lf	$600.00	**$3,600,000**
(assummed with steel sheetpiles at 40 ft)				
Note: If C were performed with A1 then the the material could be pumped into bags and the cost of C would be incidental to A1.				
2. Willow road seepage and structural upgrade				
190 to 220 and 270 to 320	8000	lf		
A.Raising and widening levee to the waterside	50000	cy	$40.00	$2,000,000
Mitigation for fill in water	4.00	acres	$100,000.00	$400,000
B. Core Trench in levee	8000	lf	$200.00	$1,600,000
Subtotal				**$4,000,000**
C. Double sheetpile wall	8000	lf	$600.00	**$4,800,000**
(assummed with plastic sheetpiles at 20 ft)				
3. Rock Slope protection				
Provide Rip Rap from Station 0 to 606	60600	lf		
Estimate at 1.5 tons per running foot	90900	tons	$32.00	**$2,908,800**
4. All weather road				
Provide Class 2 AB Station 0 to 606	60600	lf		
Estimate at 1 tons per running foot	60600.00	tons	$28.00	**$1,696,800**

HORSESHOE BEND
WATERSIDE FILL &
SEEPAGE REPAIRS

POTENTIAL LEVEE UPGRADE AREAS
& SEEPAGE REPAIRS



VICINITY MAP

HORIZONTAL AND VERTICAL GRAPHIC SCALE: 1" = 1500'

750 0 750 1500 3000

REVISIONS		
REV.	DATE	DESCRIPTION

Green Mountain Engineering
1314 Paloma Avenue, Stockton, CA 95209
Office: 209-478-6525 Fax: 209-478-6540
Mobile: 209-649-4555

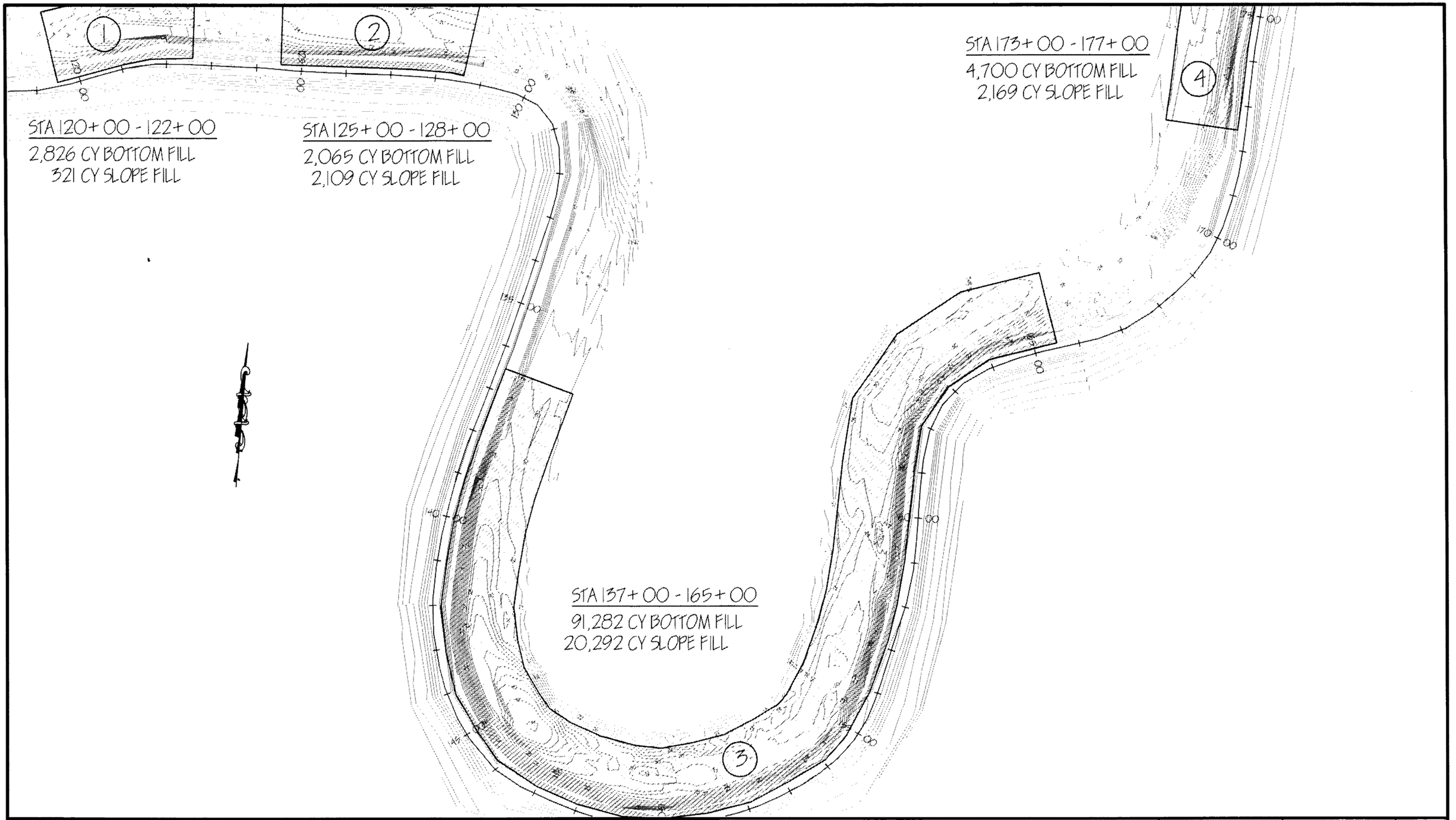
BETHEL ISLAND
POTENTIAL UPGRADE AREAS
SITE MAP

PROJECT NO:	138
DRAWN BY:	GME
DESIGN BY:	JKB
CHECK BY:	DG
SCALE:	AS SHOWN
DATE:	JAN 3, 2006
CAD FILE:	P:\138\dwg\hydrofills.dwg
LAYOUT:	hydrofills

APPROVED BY:

DATE

SHEET NO. 1 OF 7 SHEETS



STA 120+00 - 122+00
2,826 CY BOTTOM FILL
321 CY SLOPE FILL

STA 125+00 - 128+00
2,065 CY BOTTOM FILL
2,109 CY SLOPE FILL

STA 137+00 - 165+00
91,282 CY BOTTOM FILL
20,292 CY SLOPE FILL

STA 173+00 - 177+00
4,700 CY BOTTOM FILL
2,169 CY SLOPE FILL

HORIZONTAL AND VERTICAL GRAPHIC SCALE: 1" = 200'
100 0 100 200 400

REVISIONS		
REV.	DATE	DESCRIPTION

Green Mountain Engineering
1314 Paloma Avenue, Stockton, CA 95209
Office: 209-478-5525 Fax: 209-478-6540
Mobile: 209-649-4555

BETHEL ISLAND
HORSESHOE BEND WATERSIDE UPGRADES
PLAN

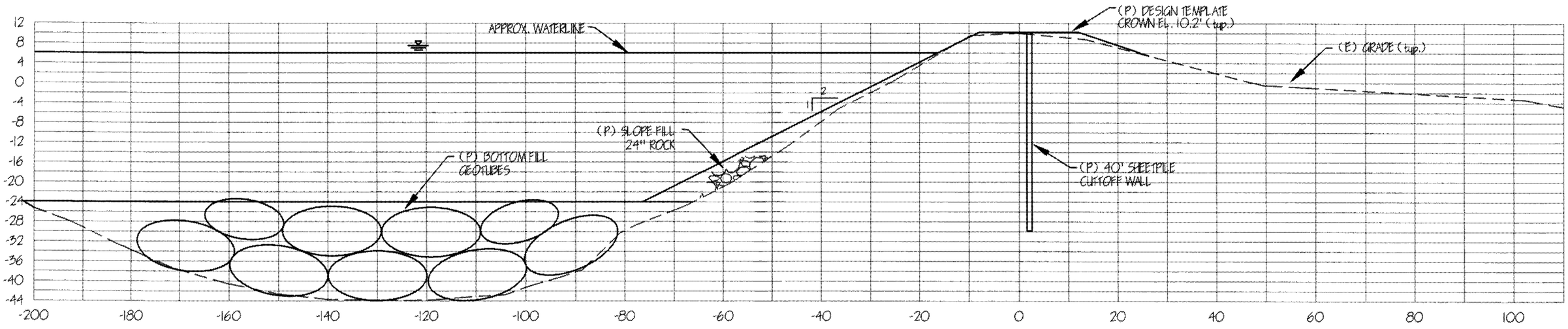
PROJECT NO:	138
DRAWN BY:	GME
DESIGN BY:	JKB
CHECK BY:	DG
SCALE:	AS SHOWN
DATE:	JAN 3, 2006
CAD FILE:	P:\138\dwg\hydrofills.dwg
LAYOUT:	hydrofills

APPROVED BY:
DATE

SHEET NO. 2 OF 7 SHEETS

TYPICAL CROSS-SECTION

GEOTUBES



HORIZONTAL AND VERTICAL GRAPHIC SCALE: 1" = 20'

10 0 5 10 20 40

REVISIONS		
REV.	DATE	DESCRIPTION

Green Mountain Engineering

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BETHEL ISLAND

HORSESHOE BEND WATERSIDE UPGRADE OPTIONS

TYPICAL CROSS-SECTION

PROJECT NO:	138
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DESIGN BY:	JKB
CHECK BY:	DG
SCALE:	AS SHOWN
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LAYOUT:	hydrofills

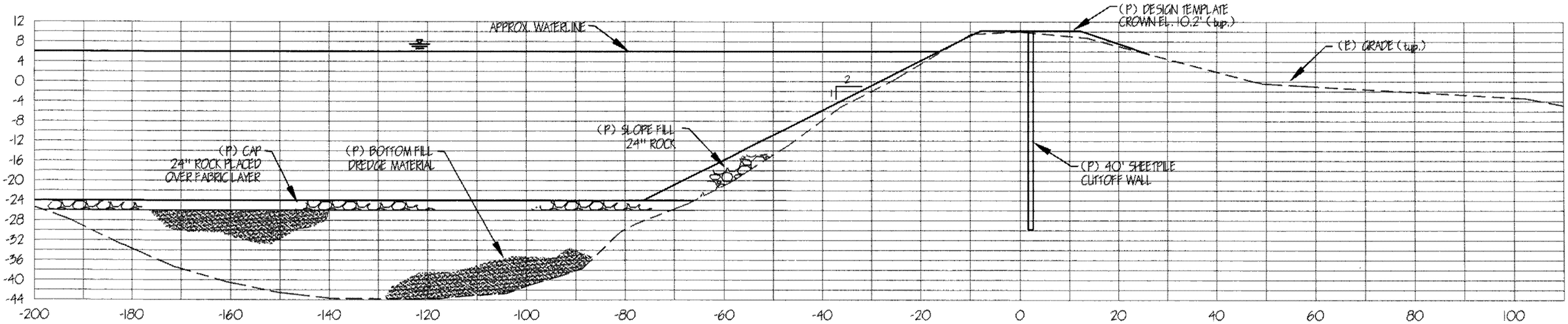
APPROVED BY:

DATE

SHEET NO. 4 OF 7 SHEETS

TYPICAL CROSS-SECTION

DREDGE FILL WITH CAP



HORIZONTAL AND VERTICAL GRAPHIC SCALE: 1" = 20'

10 0 5 10 20 40

REVISIONS		
REV.	DATE	DESCRIPTION

Green Mountain Engineering
1314 Paloma Avenue, Stockton, CA 95209
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BETHEL ISLAND
HORSESHOE BEND WATERSIDE UPGRADE OPTIONS
TYPICAL CROSS-SECTION

PROJECT NO:	138
DRAWN BY:	CME
DESIGN BY:	JKB
CHECK BY:	DG
SCALE:	AS SHOWN
DATE:	JAN 3, 2008
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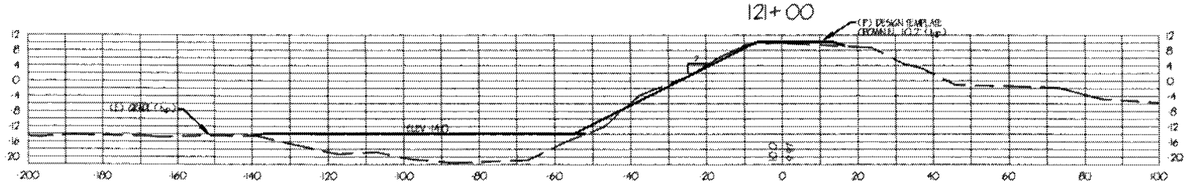
LAYOUT:	hydrofills

APPROVED BY:

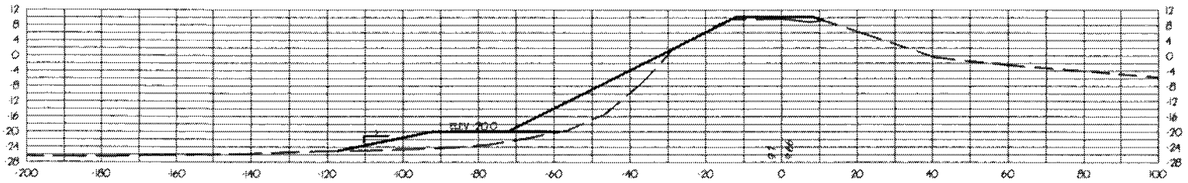
DATE

SHEET NO. 5 OF 7 SHEETS

121+00



125+00



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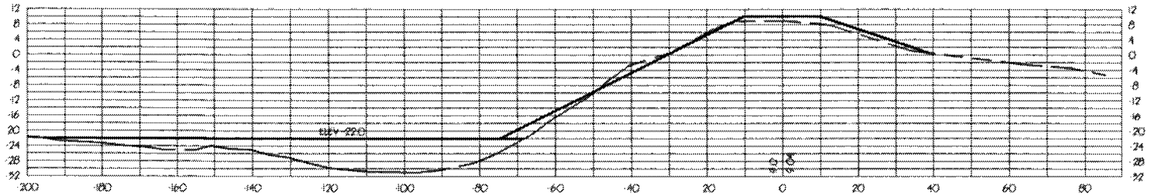
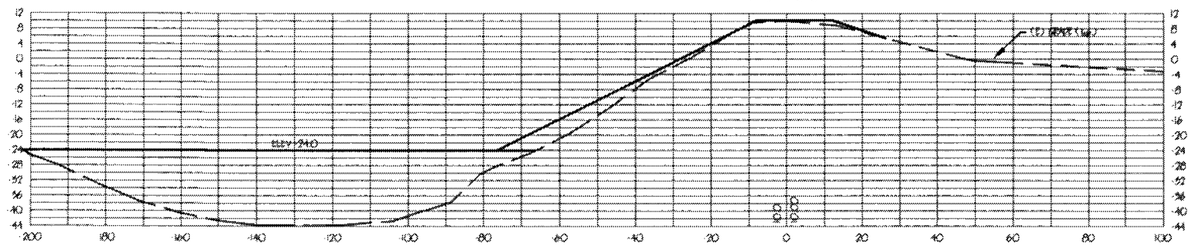


146+00



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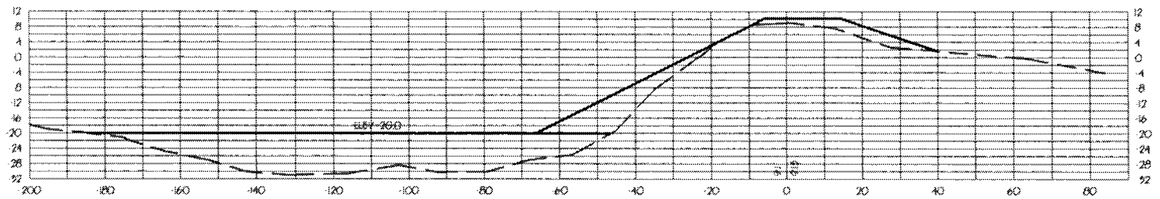

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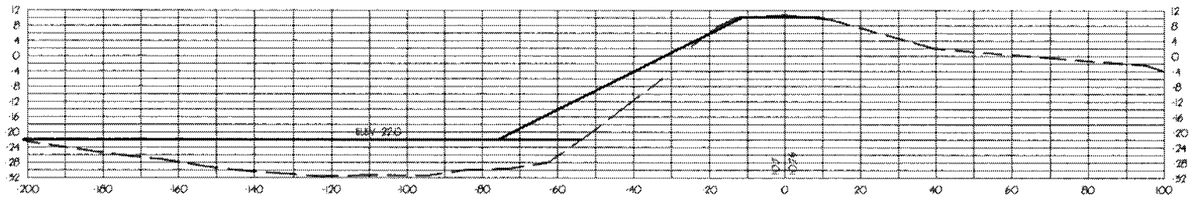

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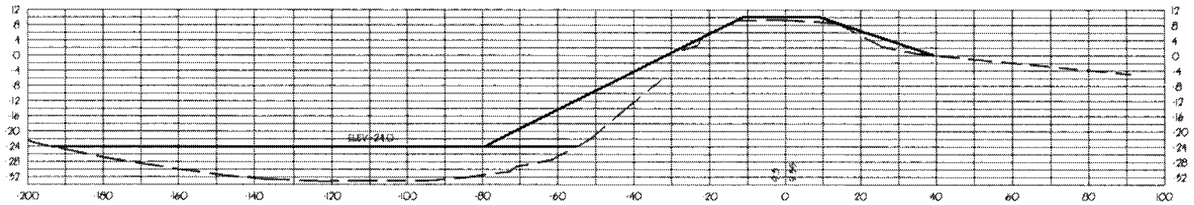
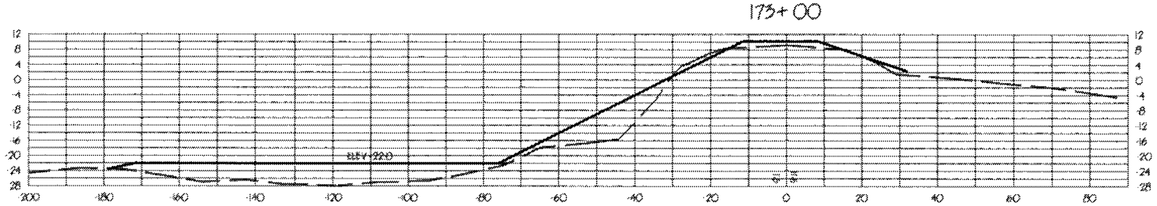


173+00



HORIZONTAL AND VERTICAL GRAPHIC SCALE: 1" = 40'

20 0 20 40 80

REVISIONS		
REV.	DATE	DESCRIPTION

Green Mountain Engineering
1314 Paloma Avenue, Stockton, CA 95209
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Mobile: 209-649-4555

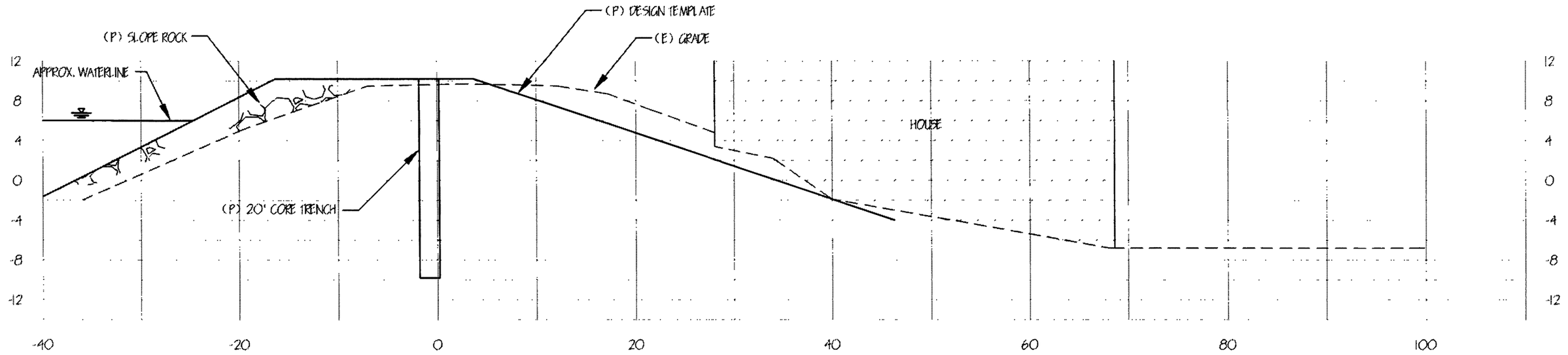
BETHEL ISLAND
HORSESHOE BEND UPGRADES
CROSS-SECTIONS

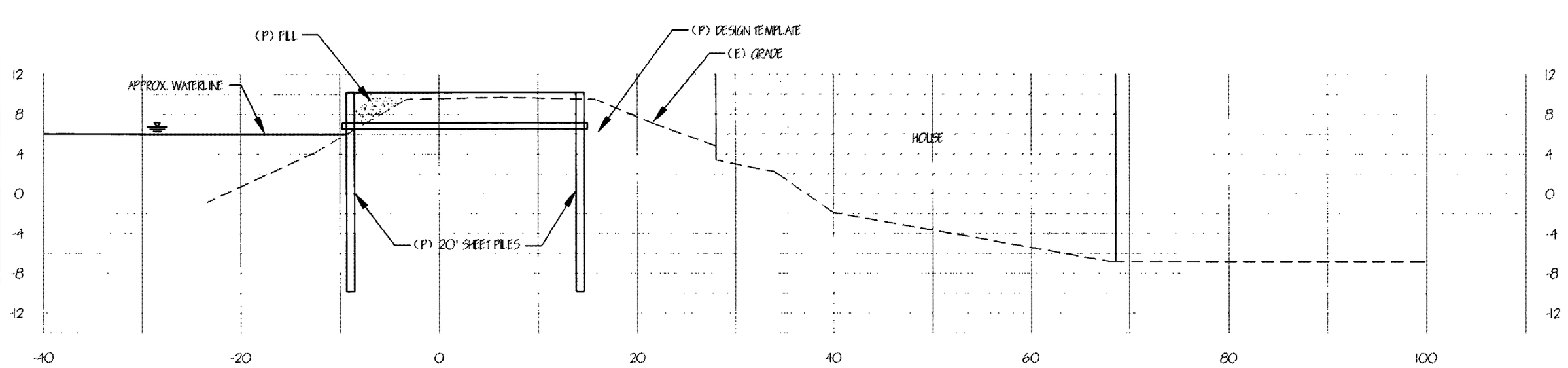
PROJECT NO:	138
DRAWN BY:	GME
DESIGN BY:	JKB
CHECK BY:	DG
SCALE:	AS SHOWN
DATE:	JAN 3, 2006
CAD FILE:	P:\138\dwg\hydrofills.dwg
LAYOUT:	hydrofills

APPROVED BY:

DATE

SHEET NO. 6 OF 7 SHEETS





HORIZONTAL AND VERTICAL GRAPHIC SCALE: 1" = 10'

5 0 5 10 20

REVISIONS		
REV.	DATE	DESCRIPTION

Green Mountain Engineering
1314 Paloma Avenue, Stockton, CA 95209
Office: 209-478-6525 Fax: 209-478-6540
Mobile: 209-649-4555

BETHEL ISLAND
WILLOW ROAD LEVEE UPGRADES
TYPICAL CROSS-SECTIONS

PROJECT NO:	138
DRAWN BY:	GME
DESIGN BY:	JKB
CHECK BY:	DG
SCALE:	AS SHOWN
DATE:	JAN 3, 2006
CAD FILE:	P:\138\dwg\hydrotilts.dwg
LAYOUT:	hydrotilts

APPROVED BY:

DATE

SHEET NO. 7 OF 7 SHEETS